Foundational Observations of a Repeatable Streaked Plasma Morphology

Abstract
This document records a repeatable plasma morphology observed during atmospheric high-voltage discharge experiments using a quartz tube, water, and a high-voltage power supply. The observations focus on a distinctive streaked internal structure embedded within the visible plasma streamer. The purpose of this report is to document the morphology as observed, distinguish direct observations from interpretation, establish chronology, and provide a permanent reference for future investigation. The author claims discovery of a **novel**, repeatable plasma morphology while making no claim that a new state of matter or previously unknown physical mechanism has been established.

Observations

Across the supplied photographs, the plasma streamer follows a smooth, coherent path rather than exhibiting only irregular branching. Embedded within the broader violet and blue emission are numerous bright orange and white streaks resembling short filament bundles or brush-like structures. These streaks consistently project outward from the primary plasma channel and often appear approximately transverse to the local direction of the streamer. The streamer repeatedly curves around the quartz tube while maintaining this internal streak pattern. Multiple emission regions are visible simultaneously, including a bright attachment point at the tube rim, a violet-blue conducting channel, and warmer orange-white luminous structures embedded within the channel. The pattern is observed repeatedly across multiple frames rather than appearing as a single isolated event. These observations are descriptive only and do not establish the physical origin of the streaks.

Statement of Discovery

The author, **Shawn Jason Calderon**, asserts that these images document a repeatable and distinctive **novel plasma morphology** observed during his experimental program. This claim is limited to the observation and documentation of this unique morphological pattern. It does not claim discovery of a new plasma state, new physical law, or new fundamental mechanism.

Protection and Attribution

• Maintain dated laboratory notebooks and preserve original image/video files.
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• Use version numbers and revision history for future releases.
• Request professional attribution whenever these observations or descriptions are reproduced.
• Consult a qualified patent attorney before public disclosure of any future patentable apparatus or methods.

This document is intended to establish priority of observation while encouraging scientific investigation and requesting acknowledgment of the author's original work.

Author Declaration and Signature

I certify that this document accurately reflects my observations at the time of publication.

Author: Shawn Calderon

Shawn Jason Calderon

Signature:

Date: 20 JULY 2026

Witness (optional): _____

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